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## Plague in San Francisco during October, 1900.

SAN FRANCISCO QUARANTINE STATION, Angel Island, Cal., October 29, 1900.

SIR: In reply to Bureau letter of the 20th instant (C. H. W.,) and in confirmation of telegram sent on the 27th, I have the honor to state that during the month of October 3 cases of plague have occurred in San Francisco among the Chinese. All cases terminated fatally. The first death occurred on October 5, at 720½ Dupont street. The case was a cigar maker, who had been working just previous to his last illness in a cigar factory on Battery street. The history which was obtained from the acquaintances of the man was that he had been ill about four or five days before death. No clinical history of his illness could be obtained. The post-mortem examination was limited to the removal of the enlarged femoral glands, which, on examination, both microscopically and bacteriologically, showed the plague bacillus. The bacteriologist of the city board of health submitted some of the gland tissues to me for an examination. This was examined in the laboratory at this station, with the result of confirming the diagnosis.

The second death occurred on October 10 at 767 Clay street, in the same house whence a case of plague was removed to the city hospital, dying there on July 5. This man had been ill for a week or more, and was treated by a white physician. The death certificate gave the cause of death "typhoid pneumonia." Dr. Kellogg informs me that on inspecting the body a mass of enlarged femoral glands was seen, which, on removal, showed evidences of acute infection. Microscopical and bacteriological examination demonstrated the cause of death to be

plague.

On October 14, at request of Dr. O'Brien, the health officer, I visited a case at 905 Clay street, which was reported to present certain suspicious symptoms. This case gave a history of being ill for three and The attack commenced with a rigor, followed by fever, one half days. He was seen on the evening of the giddiness, nausea, and vomiting. 13th by a white physician, who stated that his temperature at the time of his visit was considerably over 38° C., pulse very rapid and weak. There was also nausea, vomiting, and slight diarrhea. On the following morning—the 14th—a considerable swelling of the glands in the femoral regions was observed. There was considerable elevation of temperature, and more prostration than existed the day previous. He then reported the matter to the health office as being probably a case of bubonic plague. The patient was seen about 5 o'clock on the same day by several physicians, viz, Drs. Bulkley and O'Brien, of the health board; Dr. Bunnell, police surgeon; Dr. Ryfkogel, bacteriologist to the State board of health, Dr. Lumsden, Dr. Pillsbury, and myself. The patient presented the appearance of one profoundly ill with an acute infectious dis-His temperature was 39.7° C., pulse 140, soft and compressible. ease. There was considerable delirium. Physical examination revealed an enlarged spleen and a mass of enlarged glands in the left femoral region. There were also several reddish spots over the chest and abdomen, having all the appearances of subcutaneous hemorrhages. Cover slip preparations were made from the blood, and also of the fluid aspirated from the gland. Cultivations were also made from the gland and blood. scopic examination of the cover slips demonstrated the presence of numerous diplo-bacilli, which morphologically resembled those of bubonic plague. These bacilli took on a bipolar stain with thionine, and were easily decolorized by Gram's method. The cover slips made from the

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fluid removed from the gland contained countless numbers of these bacilli. In fact, it appeared more like that of a pure culture of plague than a specimen taken from the body. The case died at 11 o'clock that night, and on the following day Dr. Kellogg, the bacteriologist, made a post-mortem examination, removing the spleen and mass of enlarged glands. These tissues on examination gave the typical appearances of plague infection.

On the following day, the 16th, colonies had developed in the tubes inoculated from the blood and glands. These were examined and found to be those of bubonic plague. Animal inoculations made from these

cultures were in ever way confirmatory.

The State board of health have instructed their bacteriologist, Dr. Ryfkogel, to be present at all post-mortem examinations and make an independent investigation. All sanitary inspectors, which were for a time employed by the various members of the board of health at the instance of the governor, have been discharged. Dr. Crowley, a member of the State board of health, stated to me on the 27th instant that the State board of health was of the opinion that for the time being the city board of health was able and ample to meet the requirements of the situation; that while there had been bacteriological evidence of the existence of bubonic plague, there was not sufficient clinical data to warrant any steps to be taken. \* \* \*

In conclusion, I would state that it is my belief that the area of infection is gradually growing wider, so that now there are only 3 blocks of the Chinese quarter proper in which there has not occurred, since March last, a case of plague. The conditions which will obtain in the next six months will be, in my opinion, conducive to a further outbreak. The Chinese population will, in a few weeks, be augmented by several thousand more than exists during the summer months. About 3,000 Chinese return every fall from the salmon canneries of Alaska. Then at the end of the fruit-picking season, which now is rapidly drawing to a close, large numbers of Chinese who are thus engaged seek a temporary home in San Francisco during the winter months. These people to all intents and purposes are contract laborers, and are of the lowest coolie class. They live under the worst hygienic conditions imaginable. It would, therefore, not surprise me to see a number of cases of plague occurring among this class of people. I will transmit, as soon as obtainable, a map showing the infected area, as well as the number of cases which have already occurred.

Respectfully,

J. J. KINYOUN, Surgeon, U. S. M. H. S.

Four deaths from plague in San Francisco.

[Telegram.]

ANGEL ISLAND, CAL., November 2, 1900.

Two Chinese found dead yesterday, plague; same family; mother, femoral bubo; child, probably pneumonic; typical organism found in both; house has had bad sanitary history.

KINYOUN.

[Telegram.]

ANGEL ISLAND, CAL., November 6, 1900.

Another case of plague reported by the local board of health occurred November 4. A trained nurse, died at Pilgrim Hospital. Had been